

For a Section 103 rejection to be proper, a *prima facie* case of obviousness must be established. See *M.P.E.P.* 2142. One requirement to establish *prima facie* case of obviousness is that the prior art references, when combined, must teach or suggest all claim limitations. See *M.P.E.P.* 2143; *M.P.E.P.* 706.02(j). Thus, if the cited references fail to teach or suggest one or more elements, the rejection is unsupported and must be withdrawn.

In this instance, the combination of Bellegarda and Millier does not teach or suggest all features of the invention as claimed. For example, independent claim 1 recites, clustering files within a semantic vector space, and "displaying the files in a hierarchical format based on the resulting clusters." Thus, the hierarchical format is derived from the content of the files themselves, i.e., "based on the resulting clusters." See e.g., *paragraph [0022], and more specifically paragraph [0036], of the disclosure as originally submitted.* The combination of Bellegarda and Miller does not disclose this claimed subject matter.

Bellegarda is directed toward clustering documents and words within documents based on closeness of semantics. As recognized in the Office Action, Bellegarda does not disclose displaying files in a hierarchical format that is based on the resulting clusters.

Millier also does not disclose this feature. In fact, Millier discloses a fundamentally different approach to the arrangement of files and folders. Millier is directed toward automatic organization of information, and in particular, it is directed toward SmartFolders for storing files based on their contents and profiles of usage. See *column 2, lines 52-55.* Millier illustrates an example SmartFolder organization in Figure 2A. Each folder in the SmartFolder structure has a list of constraints and

profiles that are created by a user. *See column 7, lines 27-42.* When it is desired to place a file in one of the SmartFolders, the input file or document 510 is processed and compared against the profile 525 and constraints 527. *See Figure 5; column 8, lines 27-38.* If the files satisfy the profile and the constraints, the file is placed into the appropriate SmartFolder.

As illustrated in Figure 7, the SmartFolders are first created by the users in steps 715-725. Once these SmartFolders are created, the documents themselves are individually evaluated by a user and compared against the profiles and constraints of these SmartFolders. Millier specifically states, "In step S715, the user enters the Categorize dialog interactive session. The user creates the Smartfolders and arrange the hierarchy of the folders according to his or her preference (Step S720). Next, the user generates the initial profile file and constraint file for each of the Smartfolders (Step S725)." *See column 9, lines 48-53 (emphasis added).* The generation of the SmartFolders themselves and organizing the Smartfolders into a hierarchy is a manual process that is performed independently of the content of the documents. In contrast, claim 1 recites "displaying the files in a hierarchical format based on the resulting clusters." Millier directly teaches away from this claimed feature.

In Millier, the user first creates the hierarchy, and then the documents are evaluated to determine which folders to place them in. In other words, the file system structure is established before the documents are evaluated. In contrast, the present applications discloses a procedure in which the files, e.g. documents, are first examined to determine similarities between them, and then the hierarchy is derived from this evaluation of the files. Thus, in the present application, the

hierarchy is based upon the content of the files. whereas in Millier it is independent of any evaluation of the files. It is based solely on user preferences.

Since neither Bellegarda nor Millier disclose the claimed feature, any combination of Bellegarda and Millier does not result in the same feature. Accordingly, independent claim 1 is distinguishable over Bellegarda and Millier.

Independent claim 11 recites, in part "wherein the semantic hierarchy is based on clustering of files based on semantic similarities"; independent claim 17 recites, in part "determining a directory structure based on determined similarities between the files"; independent claim 28 recites, in part "a semantic hierarchy that is based upon the content of said files"; and independent claim 38 recites, in part "a hierarchical format based on a result of clustering the plurality of documents." As demonstrated above, the combination of Bellegarda and Millier does not disclose these features. Accordingly, independent claims 11, 17, 28 and 38 are distinguishable over Bellegarda and Millier.

Claims 2-8, 13-16, 18-24, 27, 30-34 and 39-47 depend from independent claims 1, 11, 17, 28 and 38, directly or indirectly. Accordingly, these dependent claims are distinguishable at least due to their dependencies from allowable independent claims.

The dependent claims are also distinguishable on their own merit. For example, claim 42 recites, in part "controlling a number of clusters based on a predetermined threshold of a variance of a cluster resulting from performing the step of merging the semantic information, wherein the variance σ^2 of the cluster is measured according to an equation $\sigma^2 = \frac{n_1\sigma_1^2 + n_2\sigma_2^2}{n_1 + n_2} + \frac{n_1n_2}{n_1 + n_2}(u_1 + u_2)^2$, u_1, σ_1^2 and

u_2, σ_2^2 are means and variances of candidates for merging and n_1 and n_2 are sizes of the clusters." The Office Action asserts that this feature is disclosed in pages 1283-1284 of Bellegarda. However, Applicants are unable to determine the basis for this assertion. If the rejection is not withdrawn, a further explanation of the basis therefor is respectfully requested.

Applicants respectfully request that the rejection of claims 1-8, 11-16, 17-24 and 27-34 based on Bellegarda and Millier be withdrawn.

§103 REJECTION - BELLEGARDA, MILLIER, KASUMA

Claims 9-10, 25-26 and 35-36 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Bellegarda in view of Millier, and in further view of Kusama (U.S. Patent No. 7,085,767). *See Final Office Action, items 8 and 9 on pages 27-32.* Applicants respectfully traverse.

Claims 9-10, 25-26 and 35-36 depend from independent claims 1, 17 and 28, respectively, and it is demonstrated above that these independent claims are distinguishable over Bellegarda and Millier. Kusama does not overcome the above-noted differences between the claimed subject matter and the disclosure of Bellegarda and Millier. Accordingly, independent claims 1, 17 and 28, and therefore dependent claims 9-10, 25-26 and 35-36, are also distinguishable over Bellegarda, Millier and Kusama.

For at least the reasons stated above, Applicants respectfully request that the rejection of claims 9-10, 25-26 and 35-36 based on Bellegarda, Millier and Kusama be withdrawn.

CONCLUSION

All objections and rejections raised in the Final Office Action having been addressed, it is respectfully submitted that the present application is in condition for allowance. Applicants respectfully request that a Notice of Allowance be issued.

Respectfully submitted,

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